



US005109337A

United States Patent [19][11] **Patent Number:** 5,109,337**Ferriter et al.**[45] **Date of Patent:** Apr. 28, 1992[54] **CONCEPTUAL DESIGN TOOL**[75] **Inventors:** Kate M. Ferriter, Atlanta, Ga.;
Phillip R. Witt, Endicott, N.Y.[73] **Assignee:** IBM Corporation, Armonk, N.Y.[21] **Appl. No.:** 113,694[22] **Filed:** Oct. 28, 1987[51] **Int. Cl.⁵** G06F 15/21[52] **U.S. Cl.** 364/401; 364/464.01[58] **Field of Search** ... 364/200 MS File, 900 MS File,
364/401, 464.01[56] **References Cited****U.S. PATENT DOCUMENTS**

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A conceptual design tool uses a sketch sheet approach on a computer display to enter the functional design of a product, thereby encouraging the designer to use a top down approach to the design process. The user keys in part descriptions, and the system automatically draws a hierarchical tree structure on the computer display. The user is then prompted to consider, part by part, all of the parts in the product. A series of pop-up menus guide the user through manufacturing and planning for the part. Based on the data input by the user, the system then generates a qualified parts list and computes an estimated cost figure for the product using manufacturing information gathered by the conceptual design tool during product release planning.

5 Claims, 7 Drawing Sheets